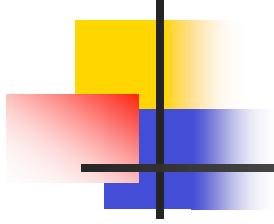


AM- vs PM- Harvested Alfalfa Hay or Haylage

**Dr. Dan Undersander
University of Wisconsin**



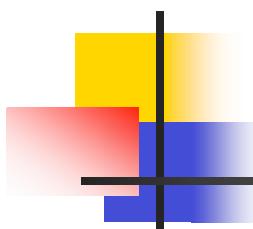


Importance of Nonfibrous Carbohydrates

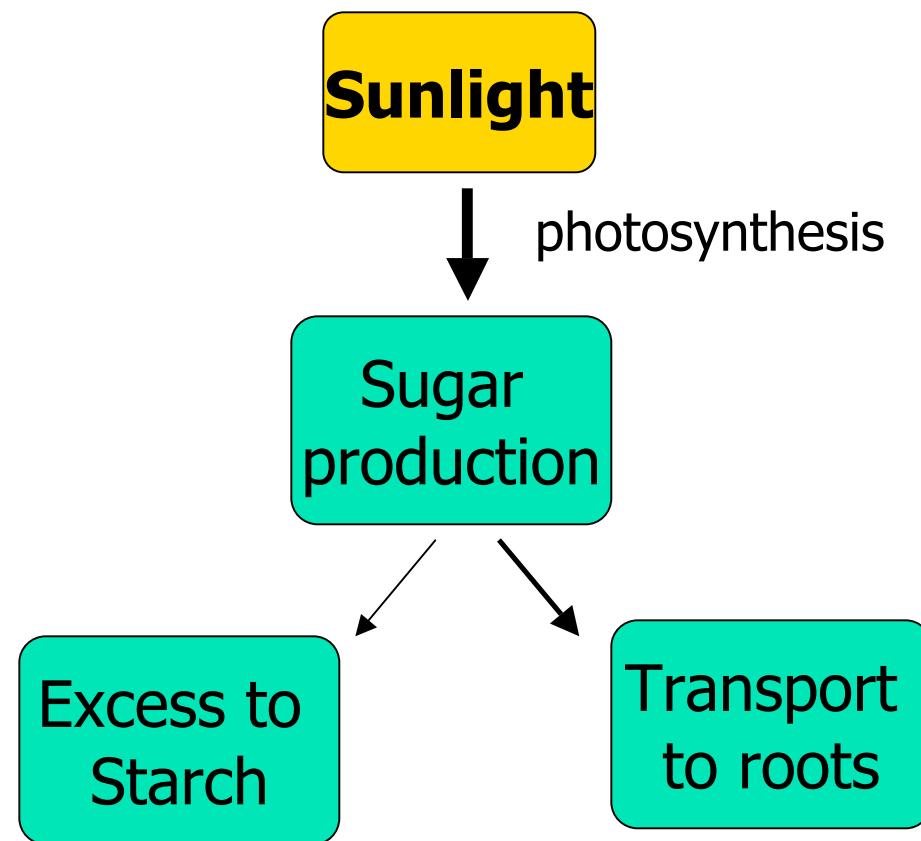
- 1) Increases energy content (sugars and starch)

$$TDN_{1-x} = tdCP + (tdFA \times 2.25) + tdNDF + tdNFC - 7$$

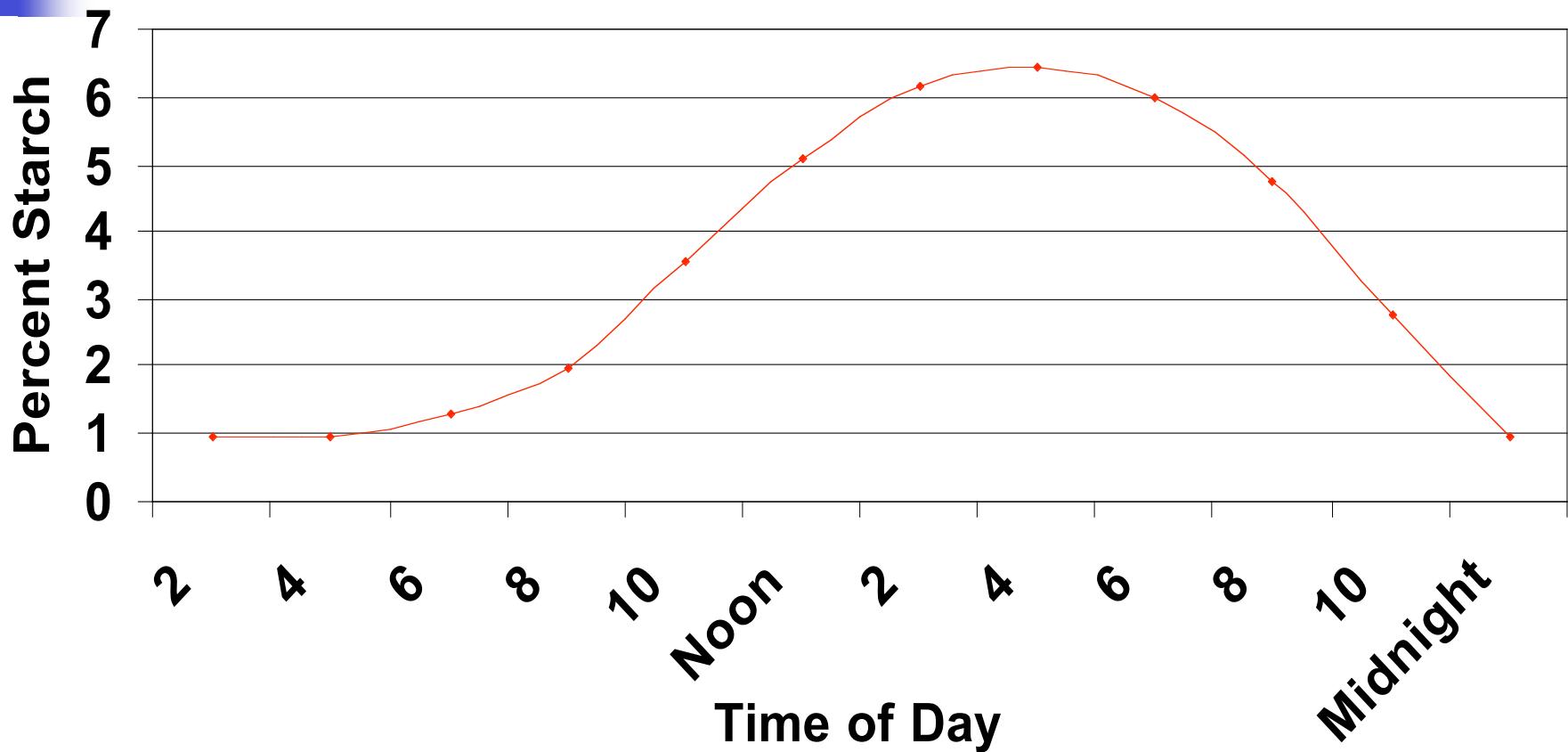
- 2) Increases intake(?)



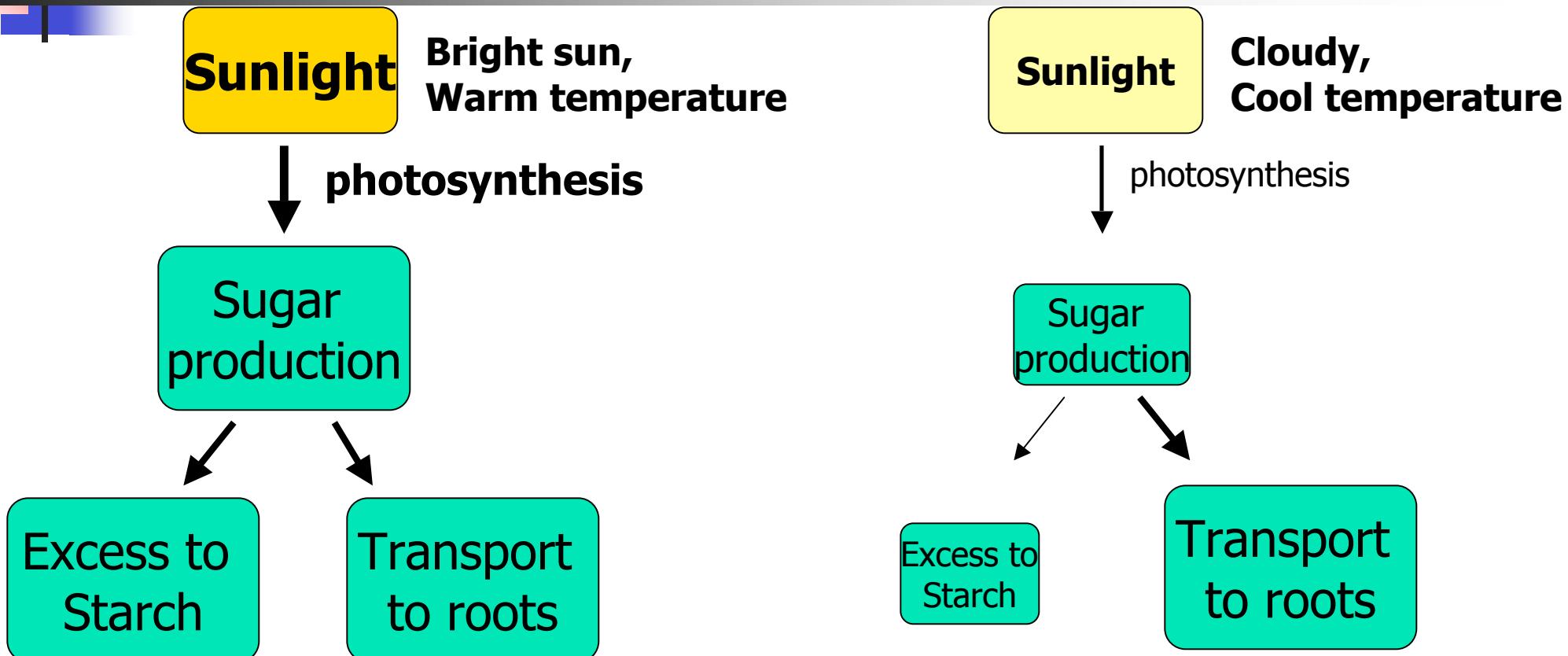
Energy production in Alfalfa



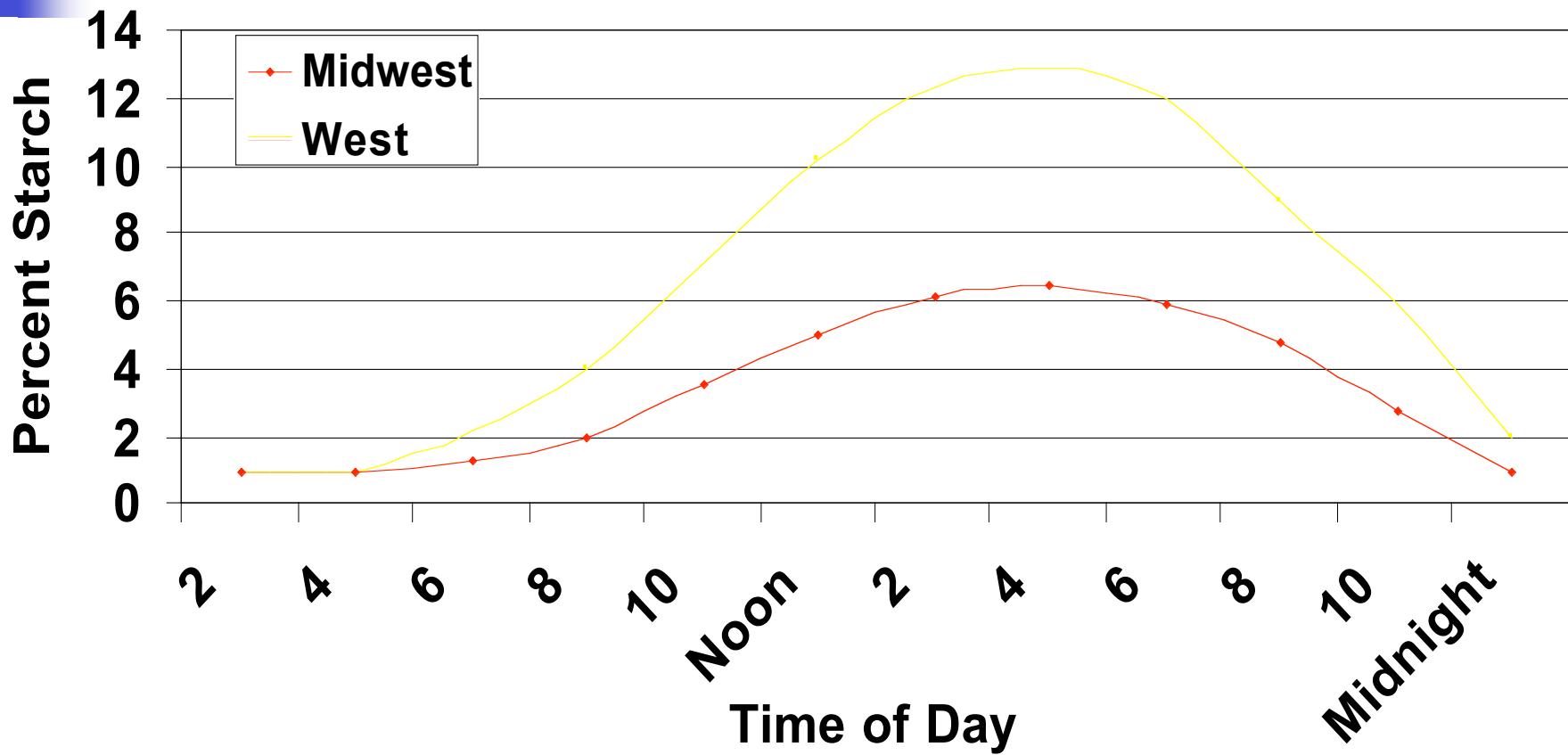
Daily Changes in Total Nonstructural Carbohydrate of Alfalfa



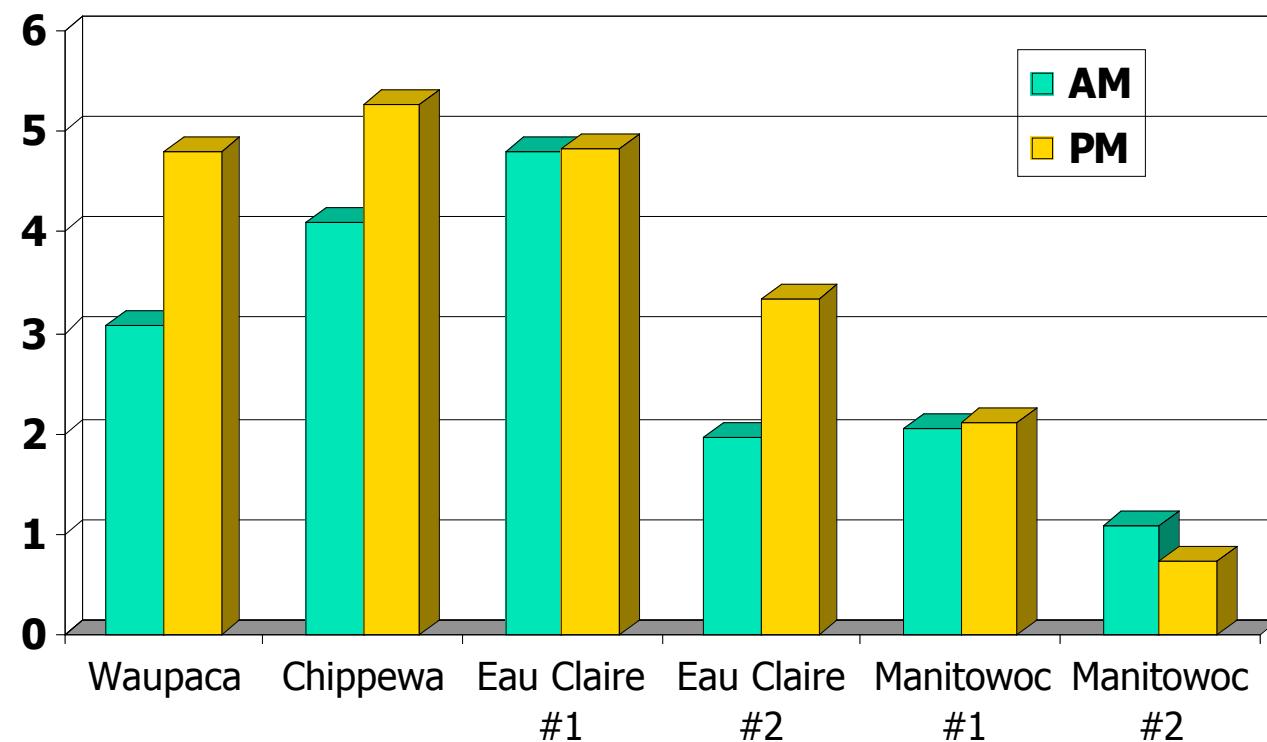
Energy production in Alfalfa

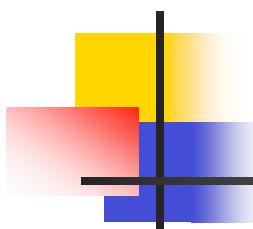


Daily Changes in Total Nonstructural Carbohydrate of Alfalfa



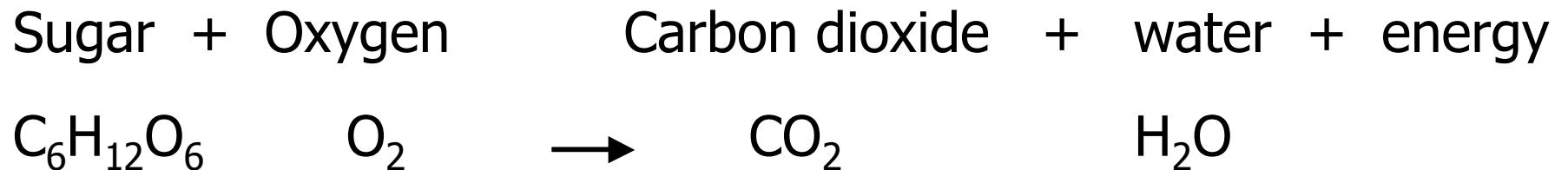
AM/PM Total Nonstructural Carbohydrate at Cutting, Wisconsin, 2000





Growth of Alfalfa

■ Respiration:

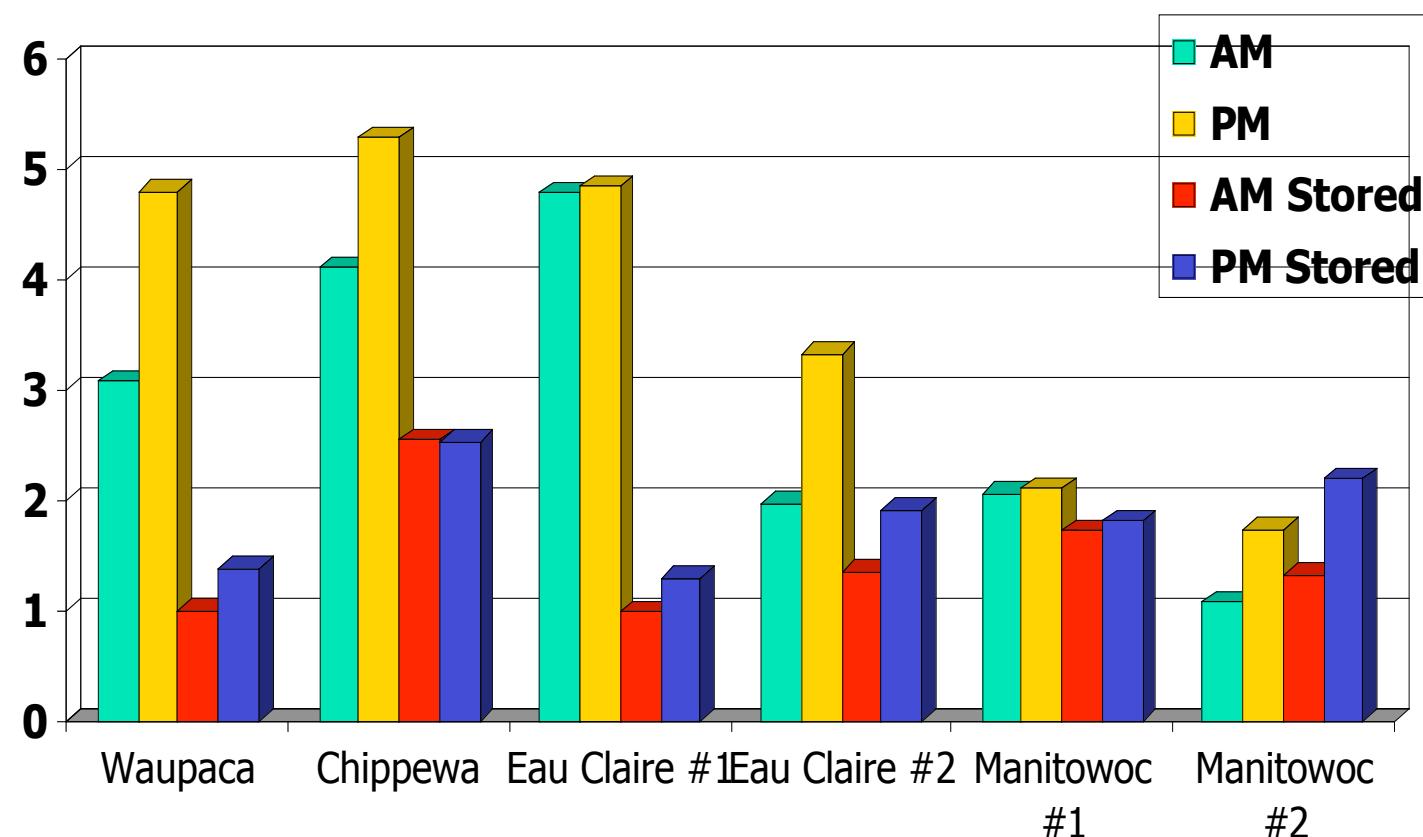


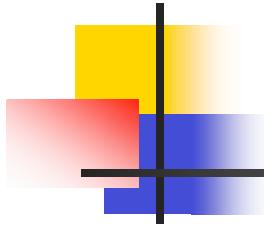
Respiration breaks down plant sugars which come from starch.

Plants will continue to respire until moisture content falls below 60%!



AM/PM Total Nonstructural Carbohydrate at Cutting and in Storage, Wisconsin, 2000





Summary

- PM cutting has been shown to increase sugars in hay harvested in western states
- In 11 of 14 Wisconsin farm samplings, pm alfalfa had higher sugars at cutting
- In 1 of 14 samplings, higher sugar occurred in stored forage